9626/32/F/M/17/Q3

1 Fig. 1 shows a sequence of tasks that are required to complete a project.

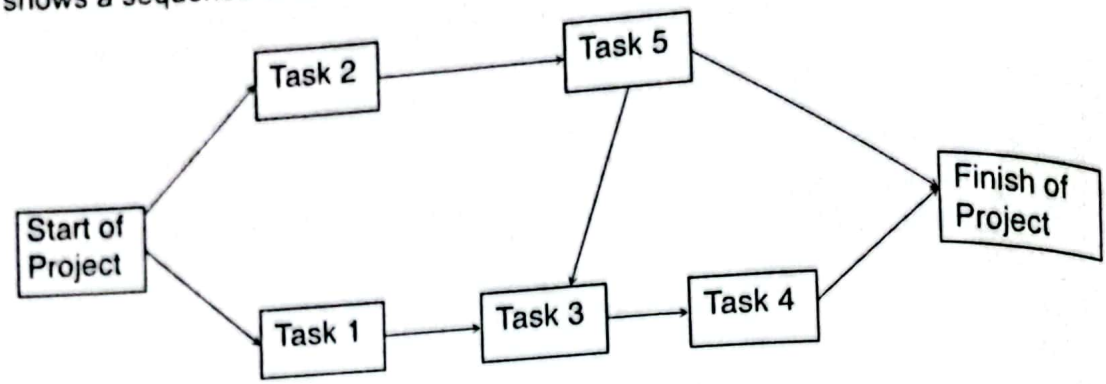

Fig. 1

The duration of each task is shown in this table:

Task	1	2	3	4	5
Duration (days)	3	5	7	2	4

There are three paths through this set of tasks.

(a) Use the information given in Fig. 1 and in the table to determine the critical path through the sequence of tasks.

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(b) Each task can have an extra amount of time allowed over its stated duration before it causes the project to be delayed. This is the 'float'.

Explain how you would calculate the float for each of the tasks in the project.

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STUDENTS RESOURCE

9626/32/F/M/17/Q7

2 Electronic data exchange is often called electronic data interchange. An online retailer and trading partners use electronic data interchange (EDI).

(a) Define EDI.

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(b) The retailer has prepared an order that has to go to a supplier. When the supplier has receiv the order, an invoice asking for payment for the goods has to go back to the retailer.

Explain how you would use EDI for these transactions.

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STUDENTS RESOURCE

9626/31/M/J/17/Q2

Project management software is used to create an overview of the tasks or activities required in a project.

One type is desktop-based project management software.

Describe other types of project management software.

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STUDENTS RESOURCE

9626/31/M/J/17/Q10

4 A large, profitable manufacturing company wishes to replace its current computer system with a new one. The company employs a large workforce in many different departments. The time to be taken for the implementation is not important but the new system must work as efficiently as possible.

The company has chosen the most appropriate method of implementation to suit its circumstances.

Identify the chosen method and explain, with reasons, why the company has chosen this compared to other methods.

[8]

STUDENTS RESOURCE

9626/32/M/J/17/Q3

5 A report about the computer system of a company is to be written. The activities to be carried out so that the report can be presented by the due dates are shown below:

Activity	Number of days allocated to activity
Evaluation of initial report	6
Initial research of the system	2
Interviewing users of the system	2
Writing the final report	4
Writing the initial report	3

Using the table below, create a Gantt chart to show a possible schedule of activities.

Clearly indicate which tasks are carried out in parallel and which tasks are carried out sequentially.

Initial report due

Final report due

Activity	Week beginning 4 September 2017					Week beginning 11 September 2017					Week beginning 18 September 2017				
	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F

[8]

STUDENTS RESOURCE

9626/33/O/N/17/Q9

6 Project management involves decision-making.

Describe how you would use software tools to assist in decision-making.

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9626/32/F/M/18/Q4

7 A building project has a number of activities, F, G, H, I, J and K, that need to be carried out between the stages A, B, C, D and E. Fig. 2 shows a Project Evaluation and Review Technique (PERT) chart for the building project.

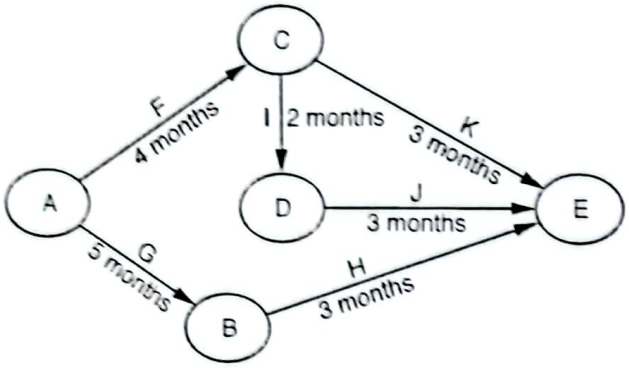

Fig. 2

(a) The building project has a series of milestones to help the managers monitor the progress of the project.

Identify the first two milestones in this project.

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(b) Describe the critical path through this project.

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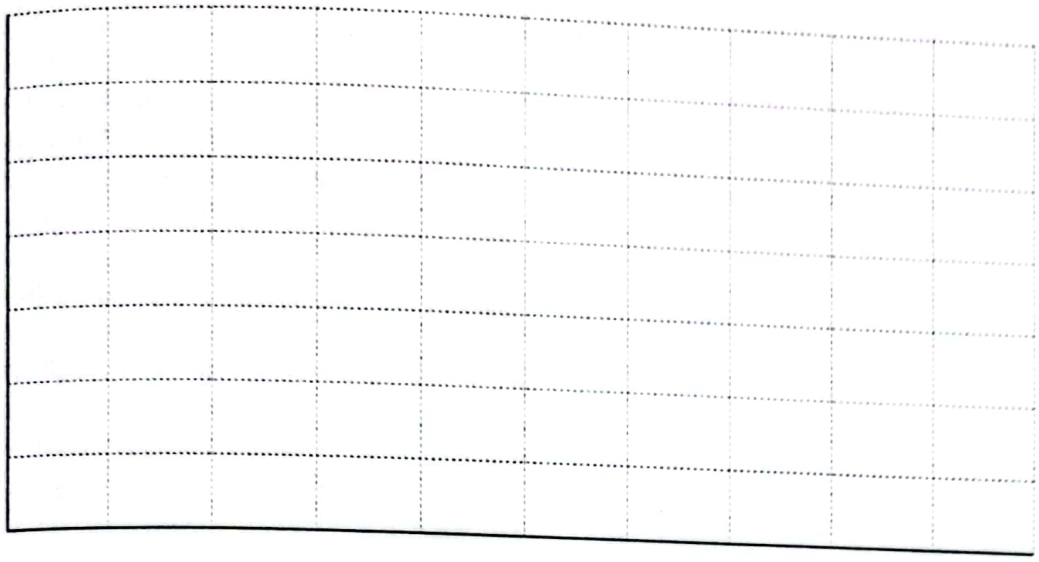
STUDENTS RESOURCE

To create the PERT chart, managers first produced a Gantt chart.

(c) On the grid below, draw and label the Gantt chart from which the PERT chart in Fig. 2 would have been derived.



[5]

9626/31/M/J/18/Q8

Discuss the advantages and disadvantages of carrying out research into an existing computerised stock control system using the analysis of existing documents.

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STUDENTS RESOURCE

9626/33/M/J/18Q10

0 Consuela is organising the building of her new house.

Discuss the advantages and disadvantages of the various types of project management software for this task.

[8]

STUDENTS RESOURCE

9626/33/O/N/18Q12

11 Analyse the use of project scheduling tools to organise a project to create a road bridge.

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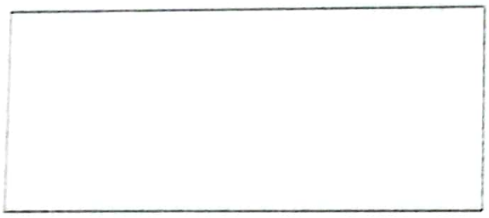
9626/32/F/M/19Q6

12 A company sells glass for installation into rectangular windows. The company cannot make glass for windows with dimensions smaller than width 12 cm and height 8 cm. The price of a window is calculated by working out the area of the window and multiplying it by the cost per square centimetre (cm^2), which is 20₹.



Area of window = a × b
Price = area × cost per cm^2

A spreadsheet with formulas has been created to carry out these calculations.

	A	B	C	D
1				
2	Input a	14	cm	
3	Input b	9	cm	
4				
5				
6	Area is:	126	cm^2	
7	Cost per cm^2 is:	20	rupees	
8	Price is:	2520	rupees	
9				
10				

These cells will be validated using a range check

STUDENTS RESOURCE

A test plan must be created to fully test the spreadsheet before the company use it.
Use this table to design a suitable test plan for this spreadsheet.

[8]

STUDENTS RESOURCE

9626/31/M/J/19Q10

13 The manager of a company has decided to contact existing customers to gather detailed feedback about a product. She needs responses from a large number of customers as quickly as possible.

Use the information given in Fig. 7.1 to select, with reasons, the most appropriate method of asking the customers for their feedback.

Criteria	Administered by:			
	Post	Telephone	Email	In person
High response rate		✓		✓
High speed of return of results		✓	✓	
Highly detailed questions possible		✓		✓
Low cost	✓		✓	
Rapport between manager and respondents		✓		✓
Short time of manager involvement	✓		✓	

Fig. 7.1

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STUDENTS RESOURCE

9626/32/M/J/19Q5

Fig. 5.1 shows a table of tasks for a building project. The tasks F, G, H, I, J and K, need to be carried out between the stages A, B, C, D and E. The project starts with stage A and ends with stage E. Stages B and C are milestones.

Task	Time (months) taken to complete task	Milestones	
		Task starts at	Task ends at
F	4	A	C
G	5	A	B
H	3	B	E
I	2	C	D
J	3	D	E
K	3	C	E

Fig. 5.1

(a) (i) Draw an activity network diagram to represent the data in the table shown in Fig. 5.1.

[5]

(ii) Calculate the critical path through the tasks.

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STUDENTS RESOURCE

9626/31/O/N/19Q5

15 A software company has employed a team of programmers to create a new computer game. The project must be completed within four weeks. The team will work five days each week. The programming team have divided the project into eight activities. Some activities can be carried out at the same time while others have to wait until the preceding activity or activities are completed.

The activities are shown in the table.

Activity code	Preceding activity which must be completed	Time that activity will take (days)
A	None	4
B	None	6
C	A	5
D	B	5
E	D	3
F	C	3
G	D, F	3
H	F	7

(a) Complete the chart below to create a Gantt chart from the table.

	Week 1					Week 2					Week 3					Week 4				
	Day					Day					Day					Day				
Activity code	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
A																				
B																				
C																				
D																				
E																				
F																				
G																				
H																				

STUDENTS RESOURCE

Use the following chart for any working out you need. **Please note, any work in this grid will NOT be marked.**

		Week 1					Week 2					Week 3					Week 4				
		Day					Day					Day					Day				
Activity code		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
A																					
B																					
C																					
D																					
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F																					
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[10]

(b) Identify the activities which form the critical path and give the length of this path.

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9626/32/O/N/19Q2

A director of a building company is overseeing a large number of projects that are managed using project management software.

- The director oversees several project managers
- The director reports to the managing director
- The director's report will include several graphs and tables
- The director and managers work from their offices
- Each manager oversees a team of project supervisors
- Project supervisors will supervise one or more projects and may share projects
- Supervisors can work from home as well as when they are visiting the building sites.

Describe, with reasons, the most appropriate type of project management software that each of the mentioned personnel could use to manage the projects.

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STUDENTS RESOURCE

9626/32/O/N/19Q12

17 A new app has been created for smartphones, but is unreliable due to some unknown coding errors.

A group of testers has been asked to locate the errors and suggest, in a report, corrections that should be made to the code before the app is ready for sale. The testers have been given a list of milestones to record their progress. These are shown:

Milestones to be reached:

1 Check that the plan will solve the unreliability issue.
2 Create a plan to correct the code.
3 Create a theory as to which lines/areas/blocks/sections of code are causing the unreliability.
4 Document the results of the testing in a report.
5 Download and install app on the smartphone.
6 Identify the problem with the code by running the app.
7 Suggest corrections that could correct the unreliability.
8 Test the suggested corrections.
9 Test the theory to see if the unreliability can be replicated elsewhere.

List, by writing the number of the milestone, the order in which these milestones should be reached by the testers.

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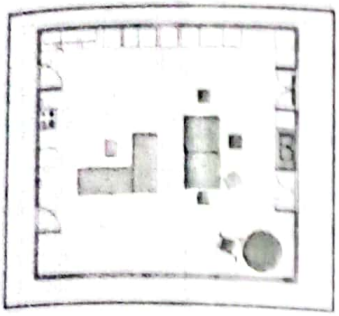
STUDENTS RESOURCE

9626/32/O/N/19Q13

18 Computer Aided Design software has been used to create a design for a new kitchen as shown:



Plan

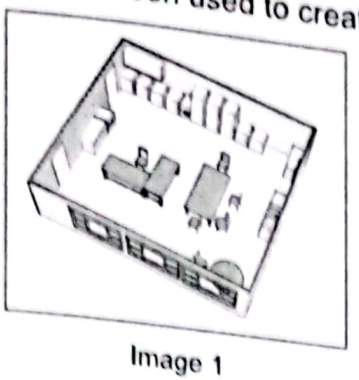


Image 1

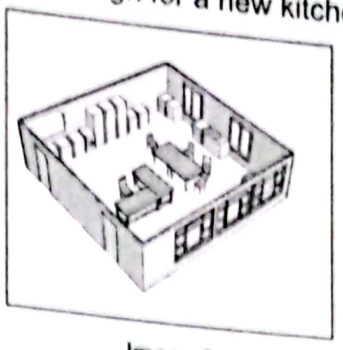


Image 2

Describe how the software tools would have been used to create the plan and the images from it.

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9626/32/F/M/20Q1

) Explain how project management software is used to schedule tasks.

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STUDENTS RESOURCE

9626/32/M/J/20/Q4

20 Explain how project management tools can be used to help when allocating resources in a project.

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STUDENTS RESOURCE

9626/32/O/N/20/Q7

(a) Explain how project management tools can be used when planning a project.

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STUDENTS RESOURCE

(b) Discuss the advantages and disadvantages of using online project management software.

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STUDENTS RESOURCE

9626/33/O/N/20/Q10

22 Planners often draw diagrams of the stages in a project so that a critical path can be calculated.

(a) Describe what must be included in a diagram so that the critical path of a project can be calculated.

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9626/32/F/M/21/Q9

23 A new house is to be built and a project has been set up to oversee its construction. Project management software will be used to estimate the costs.

(a) Describe **three** costs that should be considered for inclusion in the project management software.

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(b) Explain how project management software tools could be used to estimate the costs of building the new house.

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STUDENTS RESOURCE

Discuss the advantages and disadvantages of web-based project management software.

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STUDENTS RESOURCE

9626/31/M/J/21/Q4

25 Fig. 4.1 shows a Gantt chart.

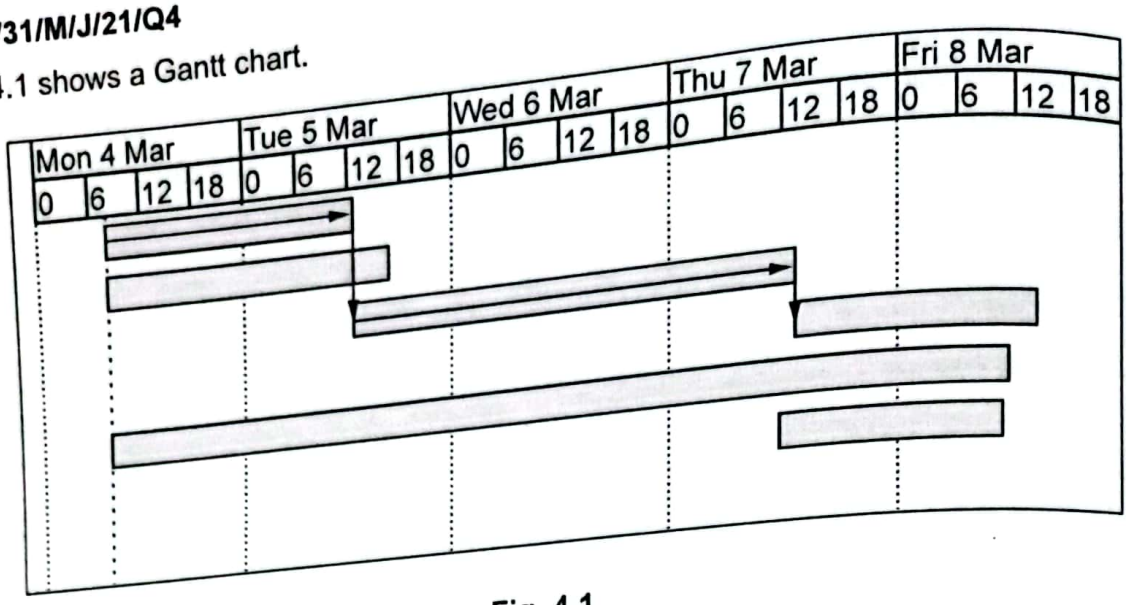

Fig. 4.1

(a) Describe **four** components of this Gantt chart.

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(b) Describe how a Gantt chart could show overdue tasks.

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STUDENTS RESOURCE

9626/31/O/N/21/Q9

26 Gantt charts are used in project management.

Describe the features of a Gantt chart.

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9626/32/M/J/22/Q9

27 Analyse the use of the critical path method in project management.

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STUDENTS RESOURCE

9626/32/M/J/18Q3

9 A store has a large number of departments each with its own sales staff. The sales staff are responsible for selling only the goods in their department. Each department has its own dedicated checkouts which are connected to the store's network.

A new checkout system is to be implemented so that the staff in the clothing department can use any of the checkouts in the store to sell goods. Staff with experience of the new system will be expected to assist in the training of staff in other departments when the new system is eventually introduced throughout the store.

The store managers have to decide how to implement the new sales and checkout system.

Describe the most appropriate method of implementation and explain how the change would be carried out in the store.

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